

SOME INSECTS OF THE HUDSONIAN ZONE IN NEW MEXICO.—VIII.

COMPILED BY T. D. A. COCKERELL.

DIPTERA.

The species here listed were collected on the top of the Las Vegas range at the end of June, 1901. The determinations are wholly by Mr. Coquillett; the other matter is by Mr. Cockerell.

Species new to the fauna of New Mexico are marked with an asterisk. Comparing the present list with Coquillett's list of the Diptera of Alaska (Pr. Wash. Ac. Sci., 1900), we note that the faunae are very similar. Twelve of our species have been actually taken in Alaska, while several others are represented there by allied forms. The greatest points of difference are: (1.) that we have four of the larger Tachinidae, including three of *Peleteria*, a genus not given in the Alaska list; (2.) that we have four Trypetidae, the Alaska list showing only one.

- * *Ptychoptera lenis*, O. S. Also Colorado.
- Simulium ochraceum*, Walker. North to Alaska, and down to the Middle Sonoran Zone (Mesilla Valley). Its presence at the lower levels is doubtless due to the migration of swarms.
- * *Tabanus sonomensis*, O. S. North to Alaska.
- * *Anthrax catulina*, Coq. There are no Bombylidae in the Alaska list. 38 species of this family are known from New Mexico, and of these 19 belong to *Anthrax*.

Cyrtopogon callipedilus, Lw. West to Sierra Nevada.

- * *Empis triangula*, Coq. North to Alaska. Discovered by the Harriman Expedition.
- * *Cheilosia hoodiana*, Bigot.
- * *Cheilosia occidentalis*, Will. At Beulah, N. M. (Canadian Zone), the genus is represented by *C. tristis*, Lw.
- Syrphus arcuatus*, Fall. N. to Alaska
- * *Syrphus intrudens*, O. S. Described from the coast range of California, but very close to *S. amalopis* from the White Mts., N. H.
- * *Sphaerophoria sulphuripes*, Thoms. N. to Alaska.
- * *Sphaerophoria melanosa*, Will. W. to California.
- * *Eristalis obscurus*, Lw. N. to Alaska.
- * *Myopa clausa*, Lw. N. E. to Maine.
- * *Panzeria radicum*, Fb. N. to Alaska. Also at Beulah, N. M.
- Gonia capitata*, DeG. Down to Mesilla Valley. Also European.
- Peleteria aenea*, Staeger. A northern type.
- Peleteria tessellata*, Fabr. Northern and European.
- Peleteria robusta*, Wied. Down to Mesilla. N. to Canada.
- * *Cordylura vittipes*, Lw. N. to Alaska.
- * *Tephritis platyptera*, Lw. N. E. to Connecticut.
- Tephritis genalis*, Thoms. W. to California; down to Mesilla, N. M.

- Urellia abstersa*, Lw. Down to Mesilla Valley; also in Cuba, etc.
- * *Urellia mevarna*, Walk. S. E. to Florida.
- Sepsis violacea*, Meig. Down to Mesilla Valley.
- * *Piophilha cascæ*, L. N. to Alaska. It would seem that this insect must be native in America.
- * *Scatella stagnalis*, Fall. N. to Alaska.
- * *Oscinis carbonaria*, Lw. N. to Alaska.
- * *Meromyza americana* Fitch. Also at Beulah, N. M.
- * *Borborus equinus*, Fall. Also European.
- * *Borborus geniculatus*, Macq.

LEPIDOPTERA.

The following species, obtained on the top of Las Vegas range at the end of June, 1901, have been kindly identified by Dr. H. G. Dyar.

- Anarta melanopa*, Thunb. Also Labrador, etc.
- Drasteria erectea*, Cram.
- Chorizagrotis agrestis*, Grote.
- Choreutis occidentella*, Dyar. Also found in Alaska.

Platyptilia cosmodyctyla, Hbn. This is the species referred to in PSYCHE, Nov., 1901, p. 272. Extends to Alaska and Europe.

Pyrausta generosa, G. & R. (?)

HYMENOPTERA, MYRMICIDÆ.

The following ants were taken on the top of the Las Vegas range at the end of June, 1901, and have been kindly determined by Prof. W. M. Wheeler.

Myrmica brevinodis, Emery. Worker.

"Smaller and darker than those from New England."

Leptothorax canadensis, Provancher. Worker and dealated ♀. Does not differ from specimens which Prof. Wheeler has from Wis., Pa., and Conn.

Both of these species are new to the fauna of New Mexico.*

CEPHALIC MORPHOLOGY. Comstock and Kochi have lately given us an important paper (Amer. Nat., 1902, vol. 36, p. 13-45, 29 figs.) upon the morphology of the insect head, and the cephalic sclerites at length assume a deeper significance and a new interest.

In this paper, the view that the head consists of seven segments is adopted and ably supported. The areas of the skull are reviewed and several sclerites hitherto disregarded are described and aptly named.

The morphology of the thoracic segments is discussed so far as is necessary to determine the structure of a typical segment, as the basis for an interpretation of the head, and then the cephalic sclerites are homologized with the thoracic ones, and the endoskeleton of the head with that of the thorax.

The presentation of the subject is logical and clear. The argument rests, of course, upon the assumption that homologies between the cephalic and the thoracic sclerites exist. If, however, the differentiation of the thoracic sclerites has been only an incidental mechanical result of strains, due to the

*I will take this opportunity to record the following ants, also new to New Mexico, kindly determined by Prof. Wheeler:—*Camponotus maculatus vicinus*, Mayr, Trout Spring, Gallinas Cañon (Transition Zone); *Formica sanguinea rubicunda*, Em., Trout Spring; *Liometopium microcephalum occidentale*, Emery, Romeroville (Upper Sonoran Zone); *Eciton californicum*, Mayr, Las Vegas; *Stenamma fulvum aquia*, Buckl. Trout Spring; *Brachymyrmex heeri depilis*, Em., Trout Spring; *Cremastogaster punctulata*, Em., Las Vegas and Las Vegas Hot Springs; *C. lineolata*, subsp. *coarctata* var. *norminum*, Em., Romeroville.—T. D. A. C.